

REMARKS

In the specification, the paragraphs beginning at page 12, line 10, page 14, line 1, page 15, line 14, and page 16, line 20, have been amended to describe mounting the combined cache and substrate to a shelf of the package, as disclosed in FIGS.1, 3, 5 and 7.

Withdrawn claims 1-27 have been listed. Claims 28-34, 36-39 remain in the application. Claims 35 and 40 have been canceled. Independent claim 28 has been amended to include the limitations of attaching the semiconductor die to a slug, attaching the slug to a base of the package, disposing a seal between a base of the substrate and the shelf to which the substrate is attached, wherein a cavity is formed between the substrate and the base comprising only the semiconductor die. Support for these amendments may be found in the specification of the present application in at pages 10-11, lines, and at page 12, lines 10-20. Dependent claim 39 has been amended to reflect this change. Claim 31 has been amended for clarity. No new subject matter has been added with these amendments.

A. 35 U.S.C. § 103(a)

M.P.E.P. 706.02(j) sets forth the standard for a Section 103(a) rejection:

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Templeton - Claims 28, 29, 31-33 and 35-40

Claims 28, 29, 31-33 and 35-40 stand rejected under 35 U.S.C. § 103(a) as being obvious over the U.S. Patent No. 5,874,321 issued February 23, 1999 to Thomas Templeton, et al. (hereinafter “Templeton”) (Office Action, page 3).

Regarding claim 28, the Office contends that while the Templeton patent does not disclose attaching the substrate that does not have the chip mounted to it to the plurality of shelves, it would have been obvious to one skilled in the art to mount in such a manner. (Office Action, page 4).

Independent claim 28 (from which claim 29, 31-33 and 36-39 depend, claims 35 and 40 having been canceled) contains the limitations of attaching the semiconductor die to a slug, attaching the slug to a base of the package, disposing a seal between the base of the substrate and the shelf to which the substrate is attached, wherein a cavity is formed between the substrate and the base comprising only the semiconductor die. Templeton does not teach or even suggest the above limitations of amended claim 28. Moreover, Templeton teaches away from forming a cavity comprising only the semiconductor die, since Templeton teaches that any number of chips may be attached to the lid substrate or base (see FIG 7, for example).

“To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the prior art.” In *re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). Because Templeton does not teach or suggest all of the claim limitations of claim 28, from which claims 29, 31-33 and 36-39 depend, claims 28, 29, 31-33 and 36-39 are not rendered obvious by Templeton. Because the dependent claims are allowable for at least the reason of depending from allowable base claims, Applicants are not addressing further the

rejections of the dependent claims at this time. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claims 28, 29, 31-33 and 36-40 is respectfully requested.

Templeton in view of Gaudenzi- Claims 30 and 34

Claims stand rejected under 35 U.S.C. § 103(a) as being obvious over the Templeton patent in view of the U.S. Patent No. 5,313,366 issued May 17, 1994 to Gaudenzi, et al. (hereinafter “Gaudenzi”) (Office Action, page 5).

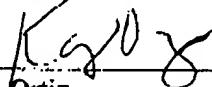
Regarding claims 30 and 34, the Office contends that while Templeton does not disclose electrically connecting the substrate to the plurality of shelves with at least one bond wire, Gaudenzi discloses such electrical connection, and that it would have been obvious to one skilled in the art to incorporate the wire bonding of Gaudenzi into Templeton (Office Action, page 6).

Independent claim 28 (from which claims 30 and 34 depend) has been amended as described previously herein. Neither Templeton alone or in combination with Gaudenzi, teach or even suggest the above limitations of amended claim 28. Thus, reconsideration and withdrawal of the Section 103(a) rejection of claims 30 and 34 is respectfully requested.

In view of the foregoing remarks, the Applicants request allowance of the application.

Please forward further communications to the address of record. If the Examiner needs to contact the below-signed agent to further the prosecution of the application, the contact number is (503) 264-0944.

Respectfully submitted,



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Dated: October 29, 2004

I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage in an envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313 on:

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